

AMENDMENTS TO THE SPECIFICATION

Please replace the second paragraph on page 4 with the following rewritten paragraphs:

This object is achieved by means of a virtual concatenation of the optical channels, i.e. lambda concatenation, similar to the virtual concatenation of the Virtual containers in the SDH or SONET synchronous transmissions, set forth in ~~the independent claims 1 and 2 the method for virtually concatenating optical channels in WDM networks comprising providing for a plurality of frames, each frame comprising a byte reserved for a concatenation flag; writing the same value defined in advance into the n-frame (n=1,2,3,...) concatenation byte; and transmitting the n frames through n respective channels and in the method for receiving a number n of virtually concatenated signal frames in WDM networks, comprising receiving a first reference frame at an instant to; reading the concatenation byte value of such reference frame; receiving the remaining n-1 signal frames after a respective determined time t; reading the concatenation byte value of the remaining n-1 signal frames; and identifying and aligning all the signal frames with the same concatenation byte value compensating for the receiving time t.~~

Further advantageous characteristics of the invention are set forth in the dependent claims. For example, an apparatus for virtually concatenating optical channels in WDM networks, comprising a first circuit for writing the same predetermined value into the concatenation byte of n-signal frames (n=1,2,3,...) ; and a transmitter of the n frames through n respective channels and an apparatus for receiving a number n of signal frames virtually concatenated in WDM networks, comprising a first receiver of a first reference frame at an instant to; a first circuit for reading the concatenation byte value of such reference frame; a

second receiver of the remaining n-1 signal frames after a respective determined time t; a second circuit for reading the concatenation byte value of the remaining n-1 frames; and a circuit for identifying and aligning all the signal frames with the same concatenation byte value compensating for the receiving times t. Claims 6 and 7 define the The apparatuses are for implementing the method of the invention.

A WDM network comprising circuits for the implementation of the method for virtually concatenating optical channels, a WDM network comprising circuits for the implementation of the method for receiving a number n of virtually concatenated signal frames, a WDM network comprising an apparatus for virtually concatenating optical channels and a WDM network comprising an apparatus for receiving a number n of virtually concatenated signal frames. Claims 8 to 11 define a WDM network incorporating the features of claims 1 to 7 the present invention. All the claims are intended to be an integral part of the present description.

Please replace the second paragraph on page 5 with the following rewritten paragraph:

BRIEF DESCRIPTION OF THE DRAWINGS

There now follows a detailed description of the present invention, given by way of a mere non limiting example, to be read with reference to the various figures, wherein:

- Fig. 1 shows an ODUK frame with related header and related payload;
- Fig. 2 shows n concatenated channels $\lambda_1, \lambda_2, \dots, \lambda_n$; and
- Fig. 3 shows a flow chart in which the main steps of the concatenation method according to the invention have been indicated.

- Fig. 4 shows a first circuit transmitter and a first receiver, first circuit, second receiver, second circuit and circuit for identifying and aligning in an exemplary embodiment of the present invention.

Please replace the third paragraph on page 6 with the following rewritten paragraph:

In other words, in the position of the VCB byte of the ODU k_{λ_1} frame to be transmitted over the first channel (λ_1), a certain value VCB#z is written; at the same time, in the position of the VCB byte of the ODU k_{λ_1} frame to be transmitted over the second channel (λ_1) the same value ~~VCBz~~VCB#z is written, and so on till the VCB of the OTU k_{λ_n} frame. The frames are then transmitted in a concatenated and perfectly aligned way.

Please replace the first paragraph on page 9 with the following rewritten paragraph:

The various steps of the method of the invention can be summarized as follows, with reference to Fig. 3.

In transmission:

- writing the same pre-established value into the virtual concatenation byte (VCB) of n-frame (n=1,2,3,...) ; and
- transmitting the n frames through n respective channels ($\lambda_1, \lambda_2, \dots, \lambda_n$) (Fig. 4).

In reception:

- receiving a first reference frame at an instant t_0 ;
- reading the virtual concatenation byte (VCB) of the reference frame;

- receiving $n-1$ frames at corresponding instants t_1 ;
- calculating, for each of the $n-1$ frames, $t = t_1 - t_0$;
- for each of the $n-1$ frames, reading the corresponding VCB and calculating

$$\Delta_{VCB} = VCB_{rif} - VCB;$$

- for each of $n-1$ frames, calculating $\Delta = t + T(VCB_{rif} - VCB)$; and
- aligning the frames depending on the corresponding value Δ obtained (Fig. 4).

**Please delete the present Abstract of the Disclosure and replace it with the
following rewritten Abstract of the Disclosure.**

A virtual concatenation method for optical channels in WDM networks is described. In transmission, the method ~~comprises the steps of:~~includes providing for a plurality of frames, each frame ~~comprising~~including a byte reserved for a concatenation flag; writing the same predefined value in the concatenation byte of n frames ($n = 1, 2, 3, \dots$); and transmitting the n frames via n respective channels ($\lambda_1, \lambda_2, \dots \lambda_n$). In reception, it ~~comprises the steps of:~~includes receiving the first reference frame at one instant; reading the concatenation byte value of ~~said~~the reference frame; receiving the remaining signal frames after a respective determined time; reading the value of the concatenation byte of the remaining signal frames; and identifying and aligning all the signal frames with the same concatenation byte value compensating the reception times. (fig. 3).